Topic 9
Fiscal Policy

Agenda

- What is Fiscal Policy
- Fiscal Policy as an automatic stabilizer
- Difficulties implementing Fiscal Policy
- Balanced Budgets
- The Laffer Curve

Motivating Questions

- What happens when a government stops spending money?
- Is it possible for a government to always be in debt?

What is Fiscal Policy

Why does the government do anything?

First a Definition

- Fiscal Policy: Changes in government purchase and/or tax collections designed to achieve a full-employment and noninflationary domestic output
- Consider two types:
  1. Changes in government purchases in Output Markets
  2. Change in net transfers

What happens to AD?

- Government purchases **increase** or taxes **decrease**
- Government purchases **decrease** or taxes **increase**

What happens to AD?

- AD Expands

- Government purchases **decrease** or taxes **increase**

What happens to AD?

- AD Expands
- AD Contracts

So we have two new definitions

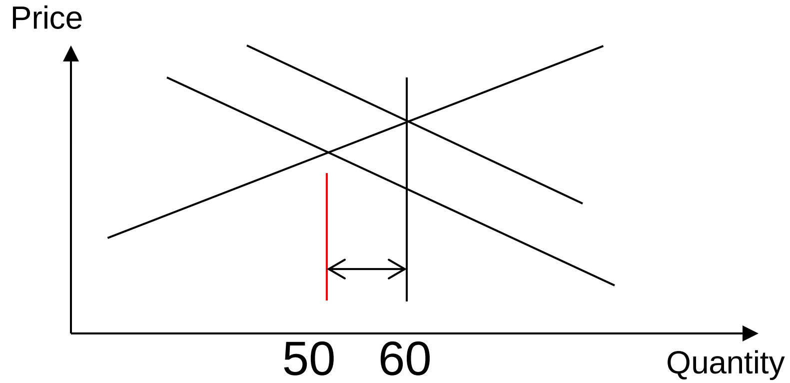
1. Expansionary Fiscal Policy: An increase in government purchases or a decrease in taxes (or a combination) for the purpose of **increasing** aggregate demand to the full-employment rate

So we have two new definitions

2. Contractionary Fiscal Policy: A decrease in government purchases or an increase in taxes (or a combination) for the purpose of **decreasing** aggregate demand to the full-employment rate

The GDP Gap

- GDP Gap – Difference between the NRO and the SR equilibrium
- GDP Gap = SReq - NRO



GDP Gap = -10

Government wants to increase RGDP by $20 billion

- Assume MPC=0.5 (so fiscal multiplier is 2)
- Policy choices:
  1. The Recovery Act – Spend our way out.
  2. “Trickle Down” – cut taxes

What if we increase Government Spending?

- Recall: ChangeY = Multiplier * CISOM
- $20 billion = 2 * CISOM
  - CISOM = $10 billion
- But ChangeG = CISOM
- So ChangeG = $10 billion

- Note Assumption: No Change in I

What if we Lower Taxes?

- ChangeY = Multiplier * CISOM
- $20 billion = 2 * CISOM
  - CISOM = $10 billion
- But CISOM=MPC*ChangeTaxes
- So ChangeTaxes = $10 billion/0.5 = $20 billion
- Assumption: No Change in I

What does this say about balanced budgets?

- Government must reduce spending (CISOM1) by $20 billion for a CISOM2 of $10 billion.
- Net CISOM= -$20 billion + $10 billion = -$10 billion
  - – Will reduce GDP, not increase it!

Aside: What is the multiplier really?

- Why does this matter? Note: If mult<1, austerity measures are **good**.
  - Ex. Multiplier = 0.5. Then decrease in G of $10 only reduces GDP by $5. Can increase RGDP by austerity and tax refunds
- Current estimate (by IMF Oct 2012): Multiplier is between 0.9 and 1.7 in Europe
- How can it be <1? Monetary policy (to be discussed later)

Aside

- Effects of Austerity in Europe

Automatic Stabilizers

(sort of like training wheels on a bike)

Why do we have training wheels on a bike?

- If we tip too far to one side, they make sure we don't fall off!

Fiscal Policy as an automatic stabilizer

1. If economy experiences a boom and everyone makes more money, what happens to total tax revenue?
2. Assume tax revenues were the same as pre-expansion. Is GDP higher or lower compared to that in point one?

In an expansionary phase, taxes __________ the economy

Fiscal Policy as an automatic stabilizer

1. If economy experiences a recession and everyone makes less money, what happens to total tax revenue?
2. Assume tax revenues were the same as pre-recession. Is GDP higher or lower compared to that in point one?

Definition of Automatic Stabilizer

- Changes in fiscal policy that stimulate AD when the economy goes into a recession (or slows AD when economy goes into a boom) without policy makers having to take any deliberate action

Other examples

- Unemployment Insurance
- Welfare benefits

Fiscal Policy Issues

Timing - Consider trying to order a drink in a busy bar

1. Takes time for the waiter to notice you want a drink
2. Waiter places order, but takes time for the bartender to make the drink
3. Takes time for the waiter to bring the drinks from the bar to your table

These are Timing Problems

1. Takes time for the waiter to notice you want a drink
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These are Timing Problems

1. Recognition Lag – takes time to confirm how economy is doing
2. Waiter places order, but takes time for the bartender to make the drink
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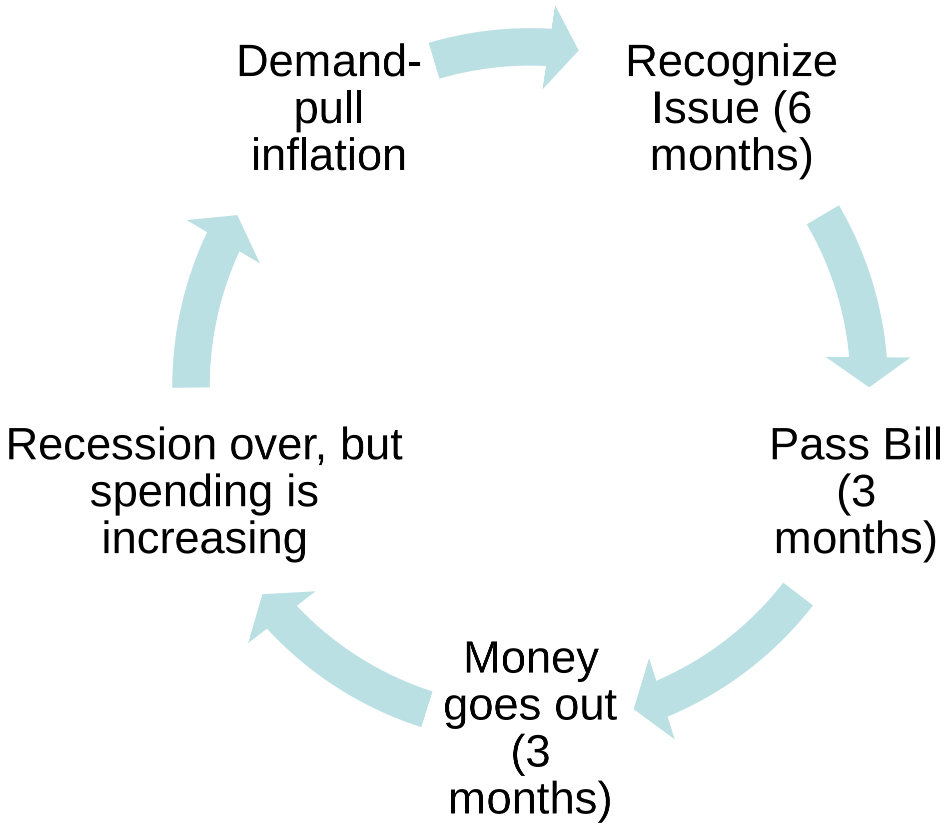
These are Timing Problems

1. Recognition Lag – takes time to confirm how economy is doing
2. Administrative Lag – Takes time to pass an economic package
3. Takes time for the waiter to bring the drinks from the bar to your table

These are Timing Problems

1. Recognition Lag – takes time to confirm how economy is doing
2. Administrative Lag – Takes time to pass an economic package
3. Operational Lag – Takes time for the stimulus to actually happen – money to get to the right places, etc.

Timing is hard! Consider a 1-year recession



Timing is hard! Consider a 1-year recession

Demand-pull inflation

Recognize Issue (6 months)

Pass Bill (3 months)

Money goes out (3 months)

Recession over, but spending is increasing

This is bad!

What is the impact of temporary versus permanent policy decisions?

World 1

- Government permanently reduces taxes

World 2

- Government reduces taxes for 1 year

- In which world would you spend more? Why?

- What if government claims to be in world 1, but next year reveals we are in world 2? What would you do the next time they introduced a policy claiming to be in world 1?

What is the impact of temporary versus permanent policy decisions?

World 1

- Government permanently increases taxes

World 2

- Government increases taxes for 1 year

- In which world would you spend less? Why?

- What if government claims to be in world 2, but next year reveals we are in world 1? What would you do next time they introduced a policy claiming world 2?

Temporary versus Permanent

- In which worlds then, would fiscal policy be more effective in altering RGDP?

- Complete this sentence:

If people think fiscal policies are _______ then fiscal policy will not have a lot of effect on the economy

We have a symmetry problem

- Issue with government incentives ….
  - Do you believe tax breaks are permanent?
  - Do you believe tax increases are temporary?
- So is a tax break effective at raising GDP?
- What about a "one-time" tax? Can you have one without hurting GDP?
  - Consider Cyprus. "One-time" tax on deposits may permanently reduce GDP by 30%!

Should we balance the budget?

Is the government like a household? i.e. “live within our means” or “debt is bad”

Which world do you prefer?

World 1

- Week 1: All you can eat buffet for every meal
- Week 2: Seven day fast (i.e. no food)
- Week 3: All you can eat buffet for every meal
- Week 4: Seven day fast
- Etc.

World 2

- Week 1: 3 meals per day, 2X00 calories
- Week 2: 3 meals per day, 2X00 calories
- Week 3: 3 meals per day, 2X00 calories
- Etc.

But what if you didn't have a steady job?

- Week 1: $100
- Week 2: -$25 (you have to pay rent each week)
- Week 3: $100
- Week 4: -$25

- With no borrowing, you will either starve or be homeless (unless you can save enough)

- Being able to borrow is important!

Governments have this same issue

- Year 1: $100 (expansion)
- Week 2: $25 (recession)
- Week 3: $100 (expansion)
- Week 4: $25 (recession)

- Government has some basic responsibilities (social security, Medicare, Medicaid, veterans affairs, etc.)
- If it can't borrow, must cut services
- Note: Assumes insufficient savings

But it is worse than that

- The government would like to spend counter-cyclically
  - Increase spending in down times (to shorten recession)
  - Decrease spending in expansion(to avoid inflation)
- A balanced budget amendment makes fiscal policy work exactly in the wrong direction!

But what about debt? It can't grow forever!

- US Public Debt - $16.75 trillion
  - $4.8 trillion – government owes itself (mostly the federal reserve)
  - $11.8 trillion – owed to public
    - $6.2 trillion – held in domestic institutions
    - $5.6 trillion – held by foreign institutions
      - $1.2 trillion – held by China
      - $1.1 trillion – held by Japan

Numbers obtained here: http://www.treasury.gov/resource-center/data-chart-center/tic/Documents/mfh.txt

Debt analysis

- Only 33% of debt is held by foreigners
  - 7% by China and Japan, less by others
- Is this a problem?
  - typical financing limits for a household is: no more than 36% of yearly income should go to financing debt (i.e. interest payments)
  - US gov't: ~6% of annual budget

Debt Analysis

- Is the *international* component too high?
- Net International Investment Position

Country	% GDP
Portugal	-108%
Ireland	-98%
Greece	-93%
Spain	-87%
Australia	-64%
United States	-17%

Debt Analysis

- How about total debt. Is it too high?
- Debt as % of GDP (from IMF)

Country	2011	2016 (projected)
Japan	233%	253%
Greece	166%	162%
Italy	121%	114%
United States	80%	115%
Canada	84%	72%
Spain	67%	77%

Should the government balance its budget?

Pros of a deficit

- Tax burden is not large compared to lifetime income (approx. $31K today)
- Depends on the big picture (in recession, can be good)
- Deficits can rise forever – as long as income rises faster!

Cons of a deficit

- Places a burden on future taxpayers – debt eventually must be paid. ***May*** result in increased taxes
- Lowers national savings – So higher interest rates, lower investment, so lower productivity, wages, and production

Should tax laws encourage savings?

Pros

- More resources available for investments, increasing productivity, wages and incomes

Con

- Benefits higher income households – rich people save a higher % of income than poor.
  - Tax breaks for savings then favour the rich (less progressivity in taxes)
- Tax policy may not be effective in encouraging savings (substitution vs income effects)

Can tax cuts pay for themselves?

i.e. Our previous assumption about Investments staying the same is just plain wrong. Tax cuts SPUR investments, so I goes up and GDP goes up.

The Laffer Curve

- Do tax cuts pay for themselves?
  - i.e. If I reduce tax rates, will it grow the economy enough to collect the same number of dollars (i.e. revenue neutral)?
- We need to consider two things:
  - Maximizing revenue in the short-run
  - Maximizing growth

The Laffer Curve – Short Run

Wages are $10 per hour

Income Tax Rate	Reported hours worked	Worker Income	Tax Revenue
0%	40	$400	$0
25%	30	$300	.25*$300 = $75
50%	20	$200	.5*$200=$100
75%	10	$100	.75*$100=$75
100%	0	$0	1*0=$0

- Increasing tax from 25% to 50% raises total revenue
- Decreasing tax from 75% to 50% also raises total revenue

The Laffer Curve – Short Run

- Where does this kink (in the short-run curve) actually take place?
- Most economists agree it is around 70%
- i.e. Can keep increasing taxes (upto average rate of 70%) and increase revenue
- Alternatively, decreasing taxes **reduces** revenue if rate is <70%

The Laffer Curve – Long Run

Income Tax Rate	Worker Income	Tax Revenue	Savings + Consumption
0%	$400	$0	$400
25%	$300	.25*$300 = $75	$225
50%	$200	.5*$200=$100	$100
75%	$100	.75*$100=$75	$25
100%	$0	1*0=$0	$0

- Which situation is best for growth?
- Balancing the short-run and long run is important

Key Ideas and Things To Think About

Note: This is NOT a study guide – i.e. do not limit yourself to these items when studying

Things to think about

- Draw a graph that shows the situation where increasing debt *doesn't* place greater tax burdens on citizens.
- When should the government pay off its debt?
- In a recession, are interest rates high or low? Is this a good time for the government to borrow?